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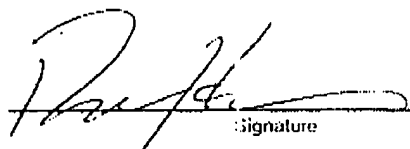
OCT 24 2005

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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) Q79675							
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Application Number 0/772,469	Filed Feb. 6, 2004								
First Named Inventor Masaru FUKUDA									
Art Unit 2839	Examiner Thanh Lam T. Le								
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p>									
I am the <input type="checkbox"/> applicant/inventor. <input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/95) <input checked="" type="checkbox"/> attorney or agent of record. 32,778 Registration number _____ <input checked="" type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 32,778		<div style="text-align: center;">  Signature Brian W. Hannon Typed or printed name </div> <div style="text-align: center;"> (202) 293-7050 Telephone number </div> <div style="text-align: center;"> October 24, 2005 Date </div>							
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.									
<input type="checkbox"/> *Total of _____ forms are submitted.									

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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OCT 24 2005

PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q79675

Masaru FUKUDA

Appln. No.: 10/772,469

Group Art Unit: 2839

Confirmation No.: 6716

Examiner: Thanh Tam T. LE

Filed: February 6, 2004

For: CONNECTOR LOCK MECHANISM

PRE-APPEAL BRIEF REASONS

MAIL STOP AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Claim Rejections Under 35 U.S.C. § 103

Claims 7-22 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over previously cited Wayt et al. (U.S. Patent No. 5,910,027). Claims 7 and 15 are in independent form. Applicant respectfully traverses this rejection for two reasons: (1) Wayt et al. does not disclose a first connector having the claimed flexible arm; and (2) the Examiner's obvious determination is not supported by the law or the teachings in Wayt et al.

In more detail, Wayt et al. does not teach the claimed connector arrangement having a first connector including a flexible arm disposed thereon, and a second connector including an arm guide member disposed on an inner surface thereof, wherein the elasticity of said flexible arm and the inclination angle of said push-out guide surface are set such that said push-out force generated thereby is greater than contact resistance caused by mutual connection between male- and female-type terminals respectively held within their associated connectors, as these claims require.

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Wayt et al. discloses a connection device having a first electrical connector 12, a second electrical connector 14, and a locking member 16 with beams 48 with projections 70. See Wayt et al. at, e.g., Fig. 1. When the first and second connectors are latched together, the locking member 16 is slidably received by the first connector so that projections 70 of the beams 48 contact with the ramps 76 of locking detents 74 provided on the second electrical connector 14. See Wayt et al. at Fig. 6-8.

According to the rejection, it is the Examiner's position that a beam 48 of Wayt et al.'s locking member 16 corresponds to the recited "flexible arm." However, Wayt et al.'s beam 48 cannot correspond to the recited "flexible arm" at least because it is not disposed on the first electrical connector 12. Instead the beams 48 extend from the locking member 16, which is separate and distinct from the first electrical connector 12.

Further, according to the rejection, the Examiner asserts that it would have been obvious to modify Wayt et al. so that it would meet this feature. Specifically, the Examiner alleges:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Wayt et al. to have an elasticity of the flexible arm and an inclination angle of the push-out guide surface [that] are set such that the push-out force generated [is] greater than a contact force caused by mutual connection between male- [and] female-type terminals respectively held within the connectors, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In *Re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), in order to easier connect and disconnect.

However, as discussed at MPEP §2144.04, it is inappropriate for the Examiner to rely solely on case law when Applicant has demonstrated a criticality to the specific limitation. In fact, the feature that the Examiner asserts as being obvious is a critical feature of the invention. That is, by providing a connector arrangement according to the invention in which "the elasticity of said flexible arm and the inclination angle of said push-out guide surface are set such that said push-out force generated thereby is greater than a contact resistance caused by a mutual connection between male- and female-type terminals respectively held within their associated

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connectors," a user of the connector arrangement is able to detect whether there is a partial engagement condition between first and second connectors.¹

Moreover, the Examiner has not pointed to any objective evidence² of a motivation or suggestion to modify Wayt et al.'s connection device so that the force of Wayt et al.'s beams 48 against the ramps 76 "is greater than a contact resistance caused by a mutual connection between male- and female-type terminals respectively held within their associated connectors."³

As discussed in the Amendment filed November 10, 2004, although some prior art connectors have used compressive springs to provide this push-out force, there is no objective evidence of any suggestion to design a connector with a flexible arm that provides this function. The claimed invention provides a simplified connector device with a decreased manufacturing cost, a reduced number of parts, and a reduced number of assembly steps.⁴

In addition, the case cited by the Examiner, *In Re Boesch and Slaney*, is only applicable to the optimization of a variable that has been recognized as achieving a result.⁵ In *In Re Boesch*

¹ See Specification at, for example, page 23, lines 5-14.

² The USPTO is held to a *rigorous* standard when trying to show that an invention would have been obvious in view of the combination of two or more references. See, *In re Sang Su Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002), citing, e.g., *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."). In *Lee*, the Federal Circuit further emphasized that the "need for specificity pervades this authority." (*Lee* at 1433 (citing *In re Kotzab*, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed")). The factual inquiry into whether to combine references "must be based on objective evidence of record." *Lee* at 1433.

³ See *Wayt* at Fig. 6.

⁴ See Specification at page 6, line 22-page 7, line 3.

⁵ See MPEP §2144.05.

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and *Slaney*, the claims were directed to a material having specific amounts of nickel and other elements. The Board of Patent Appeals and Interferences found that "lowering the N_v value of a Co-Cr-Ni alloy and deletion of metals not consumed in precipitation from the N_v calculation are expressly suggested" by prior art reference U.S. Patent No. 3,837,838.⁶ The U.S. Court of Customs and Patent Appeals relied on this evidence when it upheld the Board's decision. In contrast, in the present case, as discussed above, there is no such evidence of a suggestion to modify *Wayt et al.*'s connection device in such a way that it would meet all of the recitations of independent claims 7 and 15.

In addition, in the claimed invention, each of two arm guide surfaces has a preset length that is inclined in a direction in which male and female connectors are engaged. Therefore, when the two connectors are engaged together, the two arm guide surfaces deform elastically the two flexible arms in the mutually engaged range of them to thereby generate a push out force.

In contrast, in *Wayt et al.*, a lower ramp 78 (regarded as the "arm guide member" by the Examiner) does not have an inclined length for contacting with a beam 48 (regarded as the "flexible arm" by the Examiner) so as to generate the push-out force in the mutually engaged range of the two connectors 12, 14.⁷ Namely, contrary to the Examiner's assertion that it is obvious to one of ordinary skill in the art at the time, Applicant respectfully submits that one of ordinary skill would appreciate that the structure of *Wayt et al.* does not generate a push-out force.

Referring to paragraph number 3 of the Final Office Action, in response to Applicant's argument that that the arms 48 in combination with the inclined guide surface 78 of *Wayt et al.* do not generate a push-out force tending to separate the two connectors (and particularly does not disclose generating a push-out force that is greater than the contact resistance associated with

⁶ See *In Re Boesch and Slaney*, 205 USPQ at 219.

⁷ See modified Fig. 6 of *Wayt* in the Attachment Sheet.

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the two connectors), the Examiner disagrees and cites to column 4, lines 15-21 of Wayt et al.

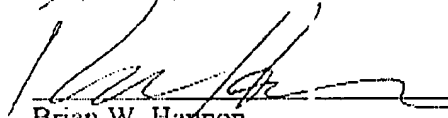
This portion of Wayt et al. states the following:

It may sometimes be desirable to disconnect the first and second electrical connectors 12, 14. If so, pulling the tab handle 46 upwardly away from the first electrical connector 12 engages the outward projections 70 with the lower ramps 78 of the locking detents 74 and moves the beams 48 toward each other. The deflection of the beams 48 permits the locking member 16 to be moved back the unlocked position.

However, a careful reading of this portion of Wayt et al. demonstrates that the Examiner's characterization of Wayt et al. is incorrect. Specifically, this recitation simply describes what happens when the two connectors are disconnected from each other. With reference to Fig. 8 of Wayt et al., when the handle is pulled upwardly, the lower ramps 78 cause the beams 48 to move toward each other so that the locking member 16 (which includes the beams) can be removed. This portion of Wayt et al. does not describe any push-out force analogous to that claimed in the subject application. In fact, if anything, the interaction of the lower ramps 78 and the beams 48 would create a force tending to bring the locking member 16 and the connector 14 together, quite the opposite of the claimed invention. This portion of the reference does not support the Examiner's obviousness position.

In view of the foregoing, it is respectfully requested that the rejection be withdrawn and the application allowed to issue.

Respectfully submitted,


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Date: October 24, 2005